

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. – 14. (canceled)

15. (new) A method comprising:

contacting an object with a cleaning liquid while the cleaning liquid is in the state of a two-phase solution, thereby removing contaminants from the object, the cleaning liquid comprising water and an organic component in amounts that are: (i) not fully miscible under a first set of conditions, in which the two-phase solution is formed, and (ii) fully miscible under a second set of conditions, in which a homogeneous, one-phase solution is formed,

changing the state of the cleaning liquid from the two-phase solution into the homogeneous, one-phase solution by application of the second set of conditions, and

removing contaminants from the cleaning liquid while the cleaning liquid is in the state of the homogeneous, one-phase solution.

16. (new) A method as in claim 15, wherein the organic component comprises lipophilic and hydrophilic groups.

17. (new) A method as in claim 15, wherein the two-phase solution comprises organic-rich droplets dispersed in a continuous aqueous phase.

18. (new) A method as in claim 15, wherein the first set of conditions comprises subjecting the cleaning liquid to a first temperature, the second set of conditions comprises subjecting the cleaning liquid to a second temperature and the first

temperature is higher than the second temperature.

19. (new) A method as in claim 15, wherein the step of removing contaminants from the cleaning liquid comprises filtering the cleaning liquid.

20. (new) A method as in claim 15, wherein the organic component comprises less than about 35% of the cleaning liquid.

21. (new) A method as in claim 15, wherein the organic component comprises between about 3-25% of the cleaning liquid.

22. (new) A method as in claim 15, wherein the organic component comprises a glycol ether.

23. (new) A method as in claim 15, wherein the organic component comprises lipophilic and hydrophilic groups, the two-phase solution comprises organic-rich droplets dispersed in a continuous aqueous phase and the organic component comprises less than about 35% of the cleaning liquid.

24. (new) A method as in claim 23, wherein the first condition comprises subjecting the cleaning liquid to a first temperature, the second condition comprises subjecting the cleaning liquid to a second temperature and the first temperature is higher than the second temperature.

25. (new) A method as in claim 24, wherein the step of removing contaminants from the cleaning liquid comprises filtering the cleaning liquid.

26. (new) A method as in claim 25, wherein the organic component comprises a glycol ether.

27. (new) A method comprising:

subjecting a cleaning liquid to a first set of conditions, wherein the cleaning liquid is brought into a state of a two-phase emulsion, the cleaning liquid comprising water and an organic component having lipophilic and hydrophilic groups, the amounts of the water and the organic component being selected so that the cleaning liquid forms: (i) the two-phase emulsion under the first set of conditions and (ii) a homogeneous, one-phase solution under a second set of conditions, the first and second sets of conditions including at least one of pressure, temperature and agitation,

contacting an object with the two-phase emulsion, thereby removing contaminants from the object while the cleaning liquid is in the state of the two-phase emulsion, wherein the object is selected from the group consisting of metals, glasses, ceramics, plastics, electric components and combinations thereof,

subjecting the cleaning liquid to the second set of conditions, wherein the cleaning liquid is brought into the state of the homogeneous, one-phase solution, and

removing the contaminants, which were removed from the object during the applying/cleaning step, from the cleaning liquid while the cleaning liquid is in the state of the homogenous, one-phase solution.

28. (new) A method as in claim 27, wherein the step of subjecting the cleaning liquid to the second set of conditions comprises lowering the temperature of the cleaning liquid.

29. (new) A method as in claim 27, wherein the two-phase emulsion comprises organic-rich droplets dispersed in a continuous aqueous phase.

30. (new) A method as in claim 27, wherein the first set of conditions comprises

subjecting the cleaning liquid to a first temperature, the second set of conditions comprises subjecting the cleaning liquid to a second temperature and the first temperature is higher than the second temperature.

31. (new) A method as in claim 27, wherein the organic component comprises less than about 35% of the cleaning liquid.

32. (new) A method as in claim 27, wherein the organic component comprises between about 3-25% of the cleaning liquid.

33. (new) A method as in claim 27, wherein the step of removing contaminants from the cleaning liquid comprises filtering the cleaning liquid.

34. (new) A method as in claim 27, wherein the organic component comprises a glycol ether.

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 – 24 (canceled)

25. (new) A method for cleaning an object comprising:

contacting the object with a cleaning fluid comprising water, a first glycol ether and a second glycol ether, wherein the first glycol ether possesses relatively high water-solubility, whereas the second glycol ether possesses relatively low water-solubility, but the second glycol ether readily dissolves in the first glycol ether, and wherein the concentration of the first and second glycol ethers is greater than the solubility of the first and second glycol ethers in water, such that the cleaning fluid is a two-phase, organic-in-water solution at a cleaning temperature, and

maintaining the cleaning fluid in the state of an emulsion for at least a portion of the time that the cleaning fluid contacts the object at the cleaning temperature, wherein both hydrophilic and hydrophobic contaminants are effectively removed from the object by the cleaning fluid.

26. (new) A method as in claim 25, wherein the first and second glycol ethers comprise 10-20% by weight of the cleaning fluid.

27. (new) A method as in claim 26, wherein the water is about 80-90% by weight of the cleaning fluid.

28. (new) A method as in claim 27, further comprising applying ultrasound to the cleaning fluid in order to maintain the cleaning fluid in the state of an emulsion.

29. (new) A method as in claim 28, further comprising maintaining the cleaning fluid at the cleaning temperature of between about 20-50°C when the object is contacted with the cleaning fluid.
30. (new) A method as in claim 29, wherein the first glycol ether is selected from the group consisting of propylene-glycol-mono-methyl-ether, dipropylene-glycol-mono-methyl-ether and tripropylene-glycol-mono-methyl-ether.
31. (new) A method as in claim 30, wherein the second glycol ether is selected from the group consisting of propylene-glycol-mono-butyl-ether, dipropylene-glycol-mono-butyl-ether, tripropylene-glycol-mono-butyl-ether, propylene-glycol-mono-methyl-ether-acetate, propylene-glycol-diacetate and dipropylene-glycol-dimethyl-ether.
32. (new) A method as in claim 30, wherein one of the first and second glycol ethers is a glycol-ether-acetate.
33. (new) A method as in claim 25, wherein the cleaning fluid is maintained in the state of an emulsion by applying ultrasound to the cleaning fluid.
34. (new) A method as in claim 25, wherein the first glycol ether is selected from the group consisting of propylene-glycol-mono-methyl-ether, dipropylene-glycol-mono-methyl-ether and tripropylene-glycol-mono-methyl-ether.
35. (new) A method as in claim 25, wherein the second glycol ether is selected from the group consisting of propylene-glycol-mono-butyl-ether, dipropylene-glycol-mono-butyl-ether, tripropylene-glycol-mono-butyl-ether, propylene-glycol-mono-methyl-ether-acetate, propylene-glycol-diacetate and dipropylene-glycol-dimethyl-ether.

36. (new) A method as in claim 25, wherein one of the first and second glycol ethers is a glycol-ether-acetate.
37. (new) A method for cleaning an object comprising:
contacting the object with a cleaning fluid comprising water, an organic solvent having a good solubility for a contaminant to be removed from the object and a glycol-ether-acetate, wherein the cleaning fluid is a two-phase, organic-in-water solution, and maintaining the cleaning fluid in the state of an emulsion for at least a portion of the time that the cleaning fluid contacts the object, wherein both hydrophilic and hydrophobic contaminants are effectively removed from the object by the cleaning fluid.
38. (new) A method as in claim 37, wherein the concentration of the organic solvent and the glycol-ether-acetate is between about 10-30% by weight.
39. (new) A method as in claim 37, wherein the concentration of the organic solvent and the glycol-ether-acetate is between about 10-20% by weight.
40. (new) A method as in claim 38, wherein the glycol-ether-acetate comprises 5-30% by weight of the cleaning fluid.
41. (new) A method as in claim 39, wherein the glycol-ether-acetate comprises 5-15% by weight of the cleaning fluid.
42. (new) A method as in claim 41, wherein the water is about 70-80% by weight of the cleaning fluid.
43. (new) A method as in claim 42, wherein the organic solvent comprises a propylene-glycol-ether.
44. (new) A method as in claim 43, wherein the propylene-glycol-ether is selected

from dipropylene-glycol-n-propyl-ether and propylene-glycol-n-butyl-ether.

45. (new) A method as in claim 44, further comprising applying ultrasound to the cleaning fluid in order to maintain the cleaning fluid in the state of an emulsion.

46. (new) A method as in claim 45, further comprising maintaining the cleaning fluid at a cleaning temperature of between about 20-50°C when the object is contacted with the cleaning fluid.

47. (new) A method as in claim 46, wherein the contaminant is selected from the group consisting of unhardened epoxy materials and adhesives, and the cleaning fluid effectively removes the at least one contaminant.

48. (new) A method as in claim 37, wherein the organic solvent comprises a propylene-glycol-ether.

49. (new) A method as in claim 37, further comprising applying ultrasound to the cleaning fluid in order to maintain the cleaning fluid in the state of an emulsion and maintaining the cleaning fluid at a cleaning temperature of between about 20-50°C when the object is contacted with the cleaning fluid.

50. (new) A method as in claim 37, wherein the contaminant is selected from the group consisting of unhardened epoxy materials and adhesives, and the cleaning fluid effectively removes the contaminant.

51. (new) A method as in claim 37, wherein the organic solvent is selected from dipropylene-glycol-n-propyl-ether and propylene-glycol-n-butyl-ether.

52. (new) A composition of matter comprising:

water,

a first glycol ether and

a second glycol ether, wherein the first glycol ether possesses relatively high water-solubility, whereas the second glycol ether possesses relatively low water-solubility, but the second glycol ether readily dissolves in the first glycol ether, the concentration of the first and second glycol ethers is greater than the solubility of the first and second glycol ethers in water, such that the composition of matter is a two-phase, organic-in-water solution, and wherein the composition of matter possesses the property of effectively removing both hydrophilic and hydrophobic contaminants from an object to be cleaned.

53. (new) A composition of matter as in claim 52, wherein the first and second glycol ethers comprise about 10-20% by weight of the composition of matter.
54. (new) A composition of matter as in claim 53, wherein the water is about 80-90% by weight of the composition of matter.
55. (new) A composition of matter as in claim 54, wherein the first glycol ether is selected from the group consisting of propylene-glycol-mono-methyl-ether, dipropylene-glycol-mono-methyl-ether and tripropylene-glycol-mono-methyl-ether.
56. (new) A composition of matter as in claim 55, wherein the second glycol ether is selected from the group consisting of propylene-glycol-mono-butyl-ether, dipropylene-glycol-mono-butyl-ether, tripropylene-glycol-mono-butyl-ether, propylene-glycol-mono-methyl-ether-acetate, propylene-glycol-diacetate and dipropylene-glycol-dimethyl-ether.
57. (new) A composition of matter as in claim 54, wherein one of the first and second glycol ethers is a glycol ether acetate.

58. (new) A composition of matter as in claim 57, wherein one of the first and second glycol-ethers comprises a propylene-glycol-ether.
59. (new) A composition of matter as in claim 52, wherein the second glycol ether is selected from the group consisting of propylene-glycol-mono-butyl-ether, dipropylene-glycol-mono-butyl-ether, tripropylene-glycol-mono-butyl-ether, propylene-glycol-mono-methyl-ether-acetate, propylene-glycol-diacetate and dipropylene-glycol-dimethyl-ether.
60. (new) A composition of matter as in claim 52, wherein one of the first and second glycol ethers is a glycol ether acetate.
61. (new) A composition of matter as in claim 60, wherein one of the first and second glycol-ethers comprises a propylene-glycol-ether.
62. (new) A composition of matter comprising:
 water,
 a glycol-ether, and
 a glycol-ether-acetate, wherein the concentration of the glycol-ether and the glycol-ether-acetate is greater than their solubility in water, such that the composition of matter is a two-phase, organic-in-water solution, and wherein the composition of matter possesses the property of effectively removing both hydrophilic and hydrophobic contaminants from an object to be cleaned.
63. (new) A composition of matter as in claim 62, wherein the glycol-ether and glycol-ether-acetate comprise about 10-30% by weight of the composition of matter.
64. (new) A composition of matter as in claim 63, wherein the glycol-ether-acetate comprises 5-15% by weight of the composition of matter.

65. (new) A composition of matter as in claim 64, wherein the water is about 70-90% by weight of the cleaning fluid.

66. (new) A composition of matter as in claim 65, wherein the glycol-ether comprises a propylene-glycol-ether.

67. (new) A composition of matter as in claim 66, wherein the propylene-glycol-ether is selected from dipropylene-glycol-n-propyl-ether and propylene-glycol-n-butyl-ether.

68. (new) A composition of matter as in claim 62, wherein the composition of matter has the property of being a two-phase, organic-in-water solution at temperatures between about 20-50°C.

69. (new) A composition of matter as in claim 62, wherein the glycol-ether comprises a propylene-glycol-ether.